

Economic and legal mechanisms for developing innovative production in agricultural engineering enterprises

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Abstract. The paper presents options for the development of the system of investment financing mechanisms in the field of agricultural machinery based on the possibilities of Russian legislation, taking into account the need to import machinery and technologies. The prospects of using customs procedures in accordance with the EAEU law and national legislation of Russia are studied. The perspectives of this kind of attraction of necessary equipment and technologies in the conditions of high interest rates on loans and sanctions pressure are noted. The authors propose options for the development of the system of investment financing mechanisms in the field of agricultural machinery based on the possibilities of Russian legislation, taking into account the need to import equipment and technology. The prospects of using customs procedures in accordance with the EAEU law and national legislation of Russia are studied. The perspectives of this kind of attraction of necessary equipment and technologies in the conditions of high interest rates on loans and sanctions pressure are noted.

1 Introduction

In the conditions of growing uncertainty in the world markets, instability and transformation of international trade, as well as anti-Russian sanctions, the import substitution policy has taken on a special significance. However, practice has shown that instead of import substitution, foreign trade has only undergone adjustment in the direction of imported goods supply. Currently, the volume of imports from China has increased significantly, as well as parallel supplies from Turkey and other countries. One of the key areas where there is a significant growth of imports is agricultural machinery products. Thus, for the period January-August 2023 (according to the data of 'Rosspetsmash', the dynamics of the agricultural machinery market in monetary terms amounted to 41%, however, this growth was mainly provided by imports (the growth of production in Russia during the analysed period - 24%, the increase in imports - 63%), which led to a decrease in the share of machines produced in Russia to 59%.

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Information on the shipment of agricultural tractors and self-propelled combines by Russian and foreign manufacturers to the domestic market in 2022 and 2023 is shown in Figure 1.

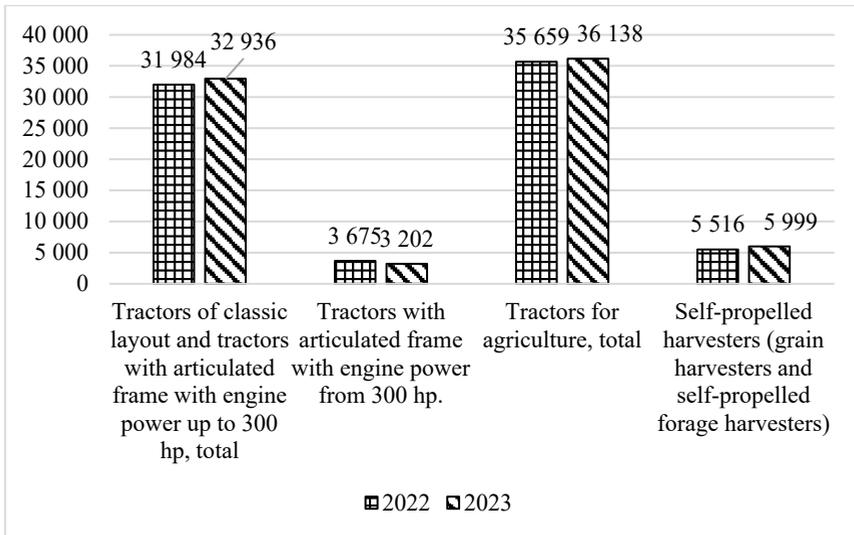


Fig. 1. Shipment of agricultural tractors and self-propelled combines by Russian and foreign manufacturers to the Russian domestic market (compiled according to Rosspetsmash).

The same report notes that the market segment of tractors with engine power from 40 to 100 hp is formed mainly by supplies from the Republic of Belarus and China, and with engine power up to 40 hp by machinery from China and Japan. - by machinery from China and Japan.

The market segment of tractors with engine power of 100 hp and above and tractors with articulated frame with engine power of up to 300 hp is formed by supplies from China, whose share in 2023 was 48% of the total volume of this market segment, and the Republic of Belarus.

Thus, there is a strong dependence on a number of categories of agricultural machinery (only tractor with articulated frame market sector with engine power of 300 hp and above is formed mainly by shipments from Russian manufacturers), which is a threat to food and national security.

At the same time in Russia there is a unique situation when, on the one hand, some participants of the agricultural machinery market had to leave Russia at the will of the leadership of their countries, the vector of supplies has changed (technological equipment, mainly from China), while at the same time the developments of the USSR period and recent years are being 'unpacked'. Thus, a peculiar environment is formed with a complex of disparate elements, which in the system could serve as a basis for the agricultural machinery industry (taking into account related industries) and the formation of a closed-cycle economy in the agro-industrial complex. I.e. the development of agricultural machinery on a new platform should be carried out taking into account the requirements of environmental protection, and this requires the active participation of the state. However, it should be remembered that the country's resources are limited (for example, to stimulate through the allocation of subsidies), so there is a need to find solutions for material support of the necessary development. It is difficult to analyse the effectiveness of the attracted resources, taking into account the need for innovative development of agricultural machinery, but it is

possible to obtain estimated values. In the work of A. T. Nguyen, an attempt was made to study the relationship between innovation and foreign direct investment [1].

Intensification of the development of agricultural machinery production in Russia, starting from localisation within the existing production facilities and ending with the creation of new ones, taking into account the formation of a closed-cycle economy of the agro-industrial complex, requires resources, primarily financial, as well as trained personnel.

Currently, the majority of investments are aimed at replacing worn-out machinery and equipment (representatives of 71% of organisations that took part in the survey in 2022 indicated this as one of the goals) (Figure 2). The second goal is automation and mechanisation of the existing production process (55% in 2022). At the same time, over the 20 years, slightly less investment has been made to increase production capacity (both with the unchanged product mix and with the expansion of the product mix). Moreover, in 2022, 38% indicated increasing production capacity with an unchanged product mix as an investment objective, while only 25% indicated that they were increasing capacity to produce new products.

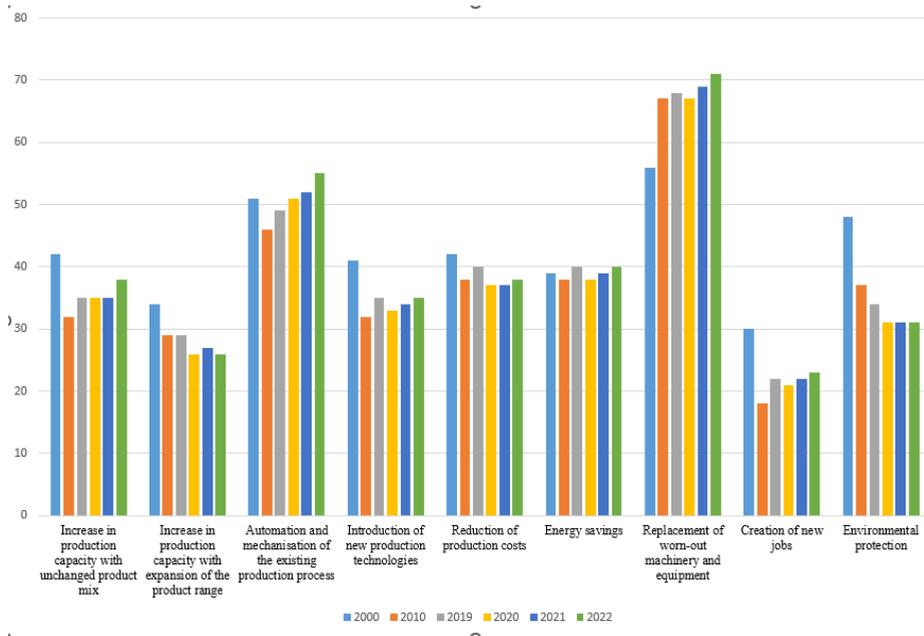


Fig. 2. Distribution of organisations by assessment of the goals of investment in fixed assets (based on the materials of sample surveys of investment activity of organisations), (as a percentage of the total number of organisations).

Very often the volume of investments is related to the availability and accessibility of investment resources, in this regard, let us consider investments in fixed capital by sources of financing (Table 1).

Table 1. Investments in fixed capital (by sources of financing, RUB billion).

	2000	2010	2020	2021	2022
Total	1053.7	6625.0	15437.60	17708.40	21829.20
including by source of funding:					
own funds	500.6	2715.0	8525.10	9911.80	11533.40
borrowed funds	553.1	3910.0	6912.50	7796.60	10295.80
of these:					

bank loans	30.6	595.8	1529.50	1952.60	2235.90
including foreign banks	6.2	150	270.8	334.3	257.1
borrowings from other organisations	75.6	404.7	750.2	805.4	1295.80
investments from abroad	n/a	n/a	50.5	67.4	63.3
budgetary funds (consolidated budget funds)	232.1	1294.9	2950.70	3235.40	4458.00
including:					
federal budget	62.9	661.9	1338.50	1421.40	2140.40
budgets of constituent entities of Russia	151.2	542.8	1430.10	1597.00	2039.40
local budgets	n/a	n/a	182,1	217	278.2
state extra-budgetary funds	50.3	21	34	36.5	42.5
funds of organisations and population for shared construction	n/a	144.2	505.2	n/a	n/a
of which funds of the population	n/a	80.5	396	n/a	n/a
other	164.5	1449.4	1092.40	1699.30	2200.30

As Table 1 shows more than half of the funds are own, slightly less - attracted. The largest share in the total volume of attracted funds with investment orientation is occupied by budgetary funds (a little less than half of all attracted funds-43.3% in 2022). Bank loans account for 21.7% of all attracted funds in 2022 or 10.24% of all investments in fixed assets. It can be assumed that in 2024 organisations will attract less loans for the purpose of investment, as money has 'become expensive' as a result of a gradual increase in the key rate to 19%.

The difficult foreign policy and trade and economic environment, as well as higher interest rates on loans, lead to the curtailment of a number of investment programmes (if there is no state funding). As a result, the key sources of investment financing remain own funds and government programmes, the share of which is increasing.

Under these conditions, the efficiency of investment resources utilisation is of particular importance. At the same time, it is important to realise that at present some fixed assets need to be imported, as they are not produced in Russia. In this case, we are talking about the purchase of agricultural machinery production means, mastering technologies, considering the prospects of integrating imported technologies with Russian developments, in contrast to the current situation of importing ready-made agricultural machinery.

2 Materials and methods

Such international organizations as the World Bank, the International Monetary Fund, UNCTAD, etc., including through researchers A. Saurav and R. Kuo, have dealt with the peculiarities of attracting foreign direct investment [2]. The relationship between investment and innovation was studied by A.T. Nguyen, P.X. Hoa, V.N. Xuan, T.P.T. Nguyen, and L.M. Huong [3]. I. Popa, M.G. Belu, D.M. Paraschiv, and A.M. Marinouiu investigated the best practices of customs procedures [4]. The advantages of the customs procedure "free customs zone" applied by residents of territories with special economic and legal status and its importance for development were considered by S.V. Shchurina [5], S.V. Frolov [5], A.A. Frolov [6], and others. In turn, V.V. Kovarda conducted a comparative analysis of customs procedures "free customs zone" and "free warehouse" [7].

The research methodology and methods are complex, i.e. they combine the analysis and synthesis of both statistical data and technical characteristics in comparison with imported

analogues. Russian legislation in the field of investment, foreign economic and customs activities is analysed, foreign practices are studied. Modelling of logistics flows and customs clearance in cost and time aspects is carried out.

3 Results and discussion

The World Bank Group in its 2020 report points to generally recognised mechanisms for attracting foreign direct investment, first of all, the formation of a special regulatory environment in host countries [2]. At the same time, a certain variation of the system of methods from direct financing to ensure the most favourable treatment is allowed. With regard to representatives of agricultural machinery in Russia (as well as related industries, except for certain IT directions), mainly, except for the use of own funds, it is possible to distinguish two mechanisms of financing the development of production (in conditions of low availability of credit resources) (Figure 3).

Direct measures of investment financing are associated with the direct allocation of funds from the budgets of the budgetary system of Russia or special state funds (other institutional formations of this kind). Indirect ones do not provide for direct allocation of funds, but the state receives certain funds due to the application of special conditions by an economic entity, implying, for example, favourable rates on taxes and fees.

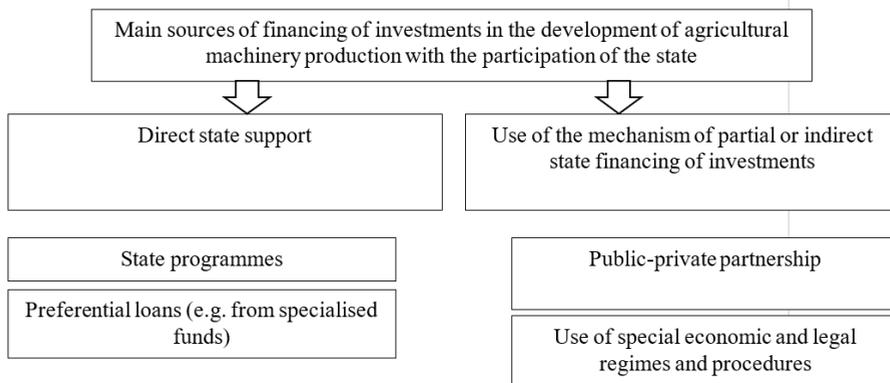


Fig. 3. Main sources of financing investments in the development of agricultural machinery production with state participation.

The division of investment financing sources presented in the figure is conditional, as a combination of financing sources is possible. For example, within the framework of special regimes (zero or favourable tax rates), such as free economic zones, the mechanism of public-private partnership is applied, when the necessary infrastructure is created by means of budget funds.

An example of direct state support is Resolution of the Government of the Russian Federation No. 1432 of 27.12.2012, according to which manufacturers of agricultural machinery are entitled to receive subsidies from the federal budget of Russia. Credit organisations also have the right to receive subsidies from the Russian federal budget as part of reimbursement of their shortfall in income on loans granted to agricultural producers. In its turn, JSC Rosagroleasing provides services under leasing agreements, receiving the opportunity to receive subsidies for reimbursement of income shortfalls in the payment of leasing payments by the lessee.

In addition to the above, Russia has established development institutions, in particular, special funds, such as the Industrial Development Fund, which provides loans on favourable

terms, as well as provides comprehensive expertise of investment projects, consults borrowers to finalise investment projects, monitors the implementation of projects, reviews documents of credit institutions to conclude agreements on granting subsidies and to receive subsidies.

Due to the fact that, firstly, the resources of the state budget and funds are limited; secondly, it is necessary to use imported machinery and technologies for the production of agricultural machinery; it is expedient to study indirect mechanisms of state stimulation of the development of innovative production within the policy of import substitution and development of closed cycle economy in the field of agricultural machinery.

I. Popa, M.G. Belu, D.M. Paraschiv, and A.M. Marinoiu point out the need for companies to adapt their production, financial, and logistics systems to customs legislation in order to gain competitive advantage [4]. In turn, M.B. Khudzhatov identifies the key areas of customs incentives for foreign investment [8]; however, the proposed classification should be slightly adjusted for agricultural machinery manufacturing enterprises (Figure 4).

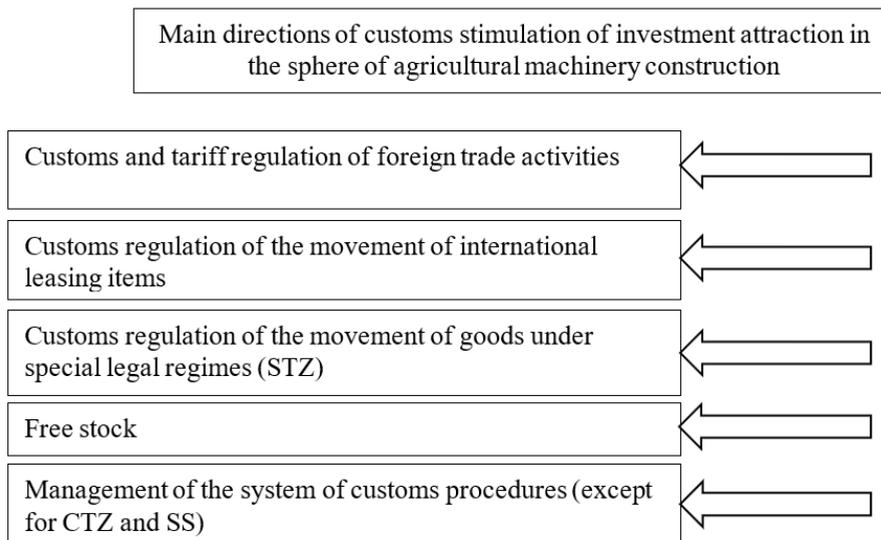


Fig. 4. The main directions of customs stimulation of investment attraction in the sphere of agricultural machinery construction.

The block of the figure ‘Customs and tariff regulation of foreign trade activities’ means the state policy with regard to the movement of agricultural machinery and its means of production across the customs border of the Eurasian Economic Union (EAEU), as well as within the association (except for international leasing and certain types of customs procedures). Within the EAEU, the elimination of barriers to mutual trade is of great importance, in particular, related to the issues of regulating tax legislation, as there are no customs duties for EAEU goods. Thus, for example, the Board of the Eurasian Economic Commission (EEC) at its meeting on 11.07.2023 recognised as eliminated and excluded from the register of barriers in the internal market of the EAEU the barrier related to the application of a less favourable taxation regime in respect of agricultural machinery manufactured at the enterprises of the EAEU countries compared to machinery manufactured in the Kyrgyz Republic (amendments were made to the Tax Code to equalise the procedure and conditions for payment of VAT).

The block 'Customs regulation of movement of international leasing items' shows whether (and how) the state stimulates the movement of agricultural machinery under international leasing.

Customs regulation of the movement of goods under special legal regimes (FTZ - customs procedure free customs zone) is one of the main mechanisms to encourage investment activity, because within certain territories there is a special legal regime that provides investors with a set of benefits and preferences (Figure 5).

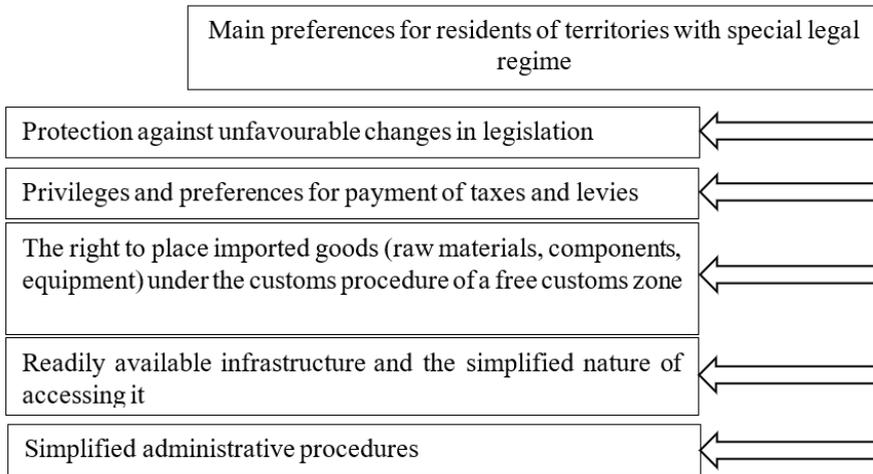


Fig. 5. Main preferences for residents of territories with special legal regime.

Russia has formed a whole set of territories with special legal status, where the preferences shown in the figure apply. Such areas correspond to the global practice and are aimed at attracting investors, including foreign ones, to Russia. First of all, such areas include free economic zones (FEZ), advanced development territories (ADT), and the Arctic zone.

Residents of such areas have the opportunity to place goods imported from abroad under the customs procedure of a free customs zone (subject to certain legal conditions). In the most general sense, two operations can be carried out with imported goods placed under the free customs zone procedure: to use them in the production process (e.g. equipment) or to process them (i.e. to use them in production as raw materials and components). Thus, for the manufacture of agricultural machinery in Russia in the absence of some domestic production technologies and components, the use of opportunities of a resident of a territory with a special status allows for the development of necessary production facilities. However, in the case of FEZs and TORs there are certain restrictions related to the volume of investments (a minimum level is set), and the entire territory with a special legal status is managed by a respective management company, which has concluded an agreement with the Ministry of Economic Development of Russia and ensures the functioning of the area. Consequently, relatively small companies do not have the opportunity to obtain the status of a resident of such a territory, however, for such production companies that are oriented on the use of imported products in the production process on the territory of Russia, there is a possibility to obtain the status of a free warehouse owner. Such business entities have the right to place imported goods under the free warehouse customs procedure, under which such goods are placed and used in a free warehouse without payment of customs duties and taxes, provided that certain conditions are met. At the moment, the register of free warehouse owners mainly includes organisations related to the implementation of FTZ projects. However, for agricultural machinery manufacturers who use imported equipment or imported raw

materials (components), placing goods under the free warehouse customs procedure will allow them to save about 20-30% of the customs value of imported goods.

Comparison of customs procedures free customs zone and free warehouse, as well as the advantages of the latter in some cases, are presented in the work of V.V. Kovarda [7].

In addition to the above-mentioned customs procedures, there are a number of other procedures that are also of interest to agricultural machinery manufacturers working with goods of foreign origin [9-10] and seeking to localise production in Russia. Among them it is necessary to highlight the customs procedures of processing and temporary importation (admission).

The international standard regarding the taxation of temporarily imported goods is established in the Kyoto Convention (On the Simplification and Harmonisation of Customs Procedures of 18 May 1973): 'Goods temporarily admitted shall be subject to full conditional exemption from import duties and taxes, except where national legislation indicates that such exemption may be only partial'.

In accordance with this international legal norm, two tax models of the customs procedure of temporary admission are distinguished (Figure 6).

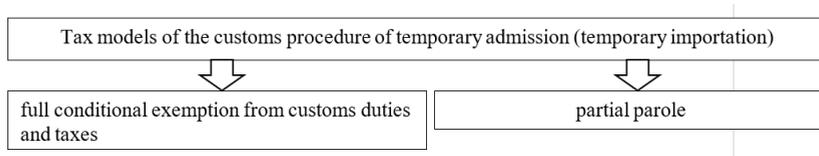


Fig. 6. Tax models of the customs procedure of temporary admission (temporary importation).

It should be noted that conditional exemption from customs duties and taxes means that it takes place only when the conditions stipulated in the customs legislation are fully fulfilled.

In general, the analysis of the legislation on customs regulation, foreign economic activity, investment activity and customs policy has shown that using the right to change the customs procedure under which the goods are placed, as well as varying the use of domestic and foreign technologies, it is possible to form a cluster of agricultural machinery manufacturers for the full cycle of agro-industrial production. As a result, the much-needed environmentally-oriented full-cycle economy will get an impetus for development.

4 Conclusion

Modelling of the processes of functioning of logistic flows and customs regulation in cost and time aspects has shown that in the framework of import of finished agricultural machinery the delivery time is shorter than import of components and equipment (in the case of unscheduled production, production 'to order'). At the same time, through the development of own production and variation of customs procedures, the costs of Russian-made machinery are reduced (due to lower production costs), the level of service quality is improved with increased efficiency, and the negative impact of geopolitical risks is reduced. At the national level, the following advantages can be noted: the degree of localisation of agricultural machinery production increases, the level of food and national security increases.

Thus, the application of customs legislation in accordance with expediency and available opportunities, in particular, the use of the right to choose the customs procedure under which imported goods are placed, provides a wide range of benefits both at the level of the economic entity and at the level of the state.

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